VARIOUS.

An Englishman's Views on American Manufactures.

In a lecture recently delivered in Sheffield, England, Mr. W. K. Marples, of that town, related his experience and observation in his travels through the United States.

"I found," says the lecturer, "in visiting various American factories, machinery much more generally used than it is with us—in fact, I sometimes saw machinery employed for a process which might have been done more cheaply by hand labour; but we must remember that until recently skilled workmen were not numerous in the States, and so manufacturers were driven to the use of machinery. The Americans are much more advanced in manufactures of all kinds than many of us are aware. Cabinet furniture, glass and china, cutlery tools, guns and pistols, agricultural implements, carpets, linen, in fact, soft and hard goods of every description are made, and in most instances made well, in the United States. Their resources are wonderful; nature has given them coal, iron, waterpower, &c., with the finest navigable rivers in the world, and then their chiefly English origin has given them pluck, endurance, and perseverance under difficulties, and these qualities, coupled with the immigration of many of our best artisans, have in the com-paratively short space of 100 years worked marvels for them. The New England States are one vast hive of manufacturing industry, and it is here that the brains of inventors are stimulated to their utmost powers in developing labor-saving articles, and the machinery to make them.

"I think the introduction of the many American ideas and inventions into England that has been attempted during the past few years will tend to develop new ideas among our workpeople, and assist us in holding our position as the great manufacturing nation of the world. I have little fear that English hardware manufacturers will succeed in holding their own in all markets where the duties are not prohibitory, as in the United States. There is little doubt that much of the boasted superiority of American manufactures in the matter of price was a mere myth, and I am fully convinced that until a few months ago, when the hardware trade in America was so depressed, the manufacturers there exported goods to England at a positive loss. In some cases this has been admitted, and the enormous advances, amounting in some goods (notably in locks) to over 100 per cent, bear me out in this opinion. Many goods, that up to a short time ago were imported from America, are now manufactured in England, and the Americans would seem to be doing their best to destroy the trade which until recently they were apparently so anxious to build up. English manufacturers have been fully alive to the situation, and will not readily allow American manufacturers to recover the ground they are now losing." *Scientific American.*

Assyrian Vases.

The Museum of the Louvre, Paris, has just acquired two vases of large size, and of the utmost importance from the scientific point of view. They are two Etruscan vases of the earliest period, with paintings in white on a red ground. On one is seen a chariot attacked by a lion — a manifest imitation of Assyrian art — and a naval engagement between two very singularly shaped vessels. The other shows two lions rampant in the Asiatic style, and two Greek myths — the birth of Athena and the boar hunt of Calydon. It likewise bears an Etruscan inscription, one of the most ancient known. The representations of Hellenic fables had not been previously noticed on remains of Etruscan painted pottery of such early date, for the two vases may be confidently attributed to the eighth or the seventh century B.C. *Scientific American.*

Darkening Oak.

In a recent communication to the Mulhausen Gewerbverein, Herr Schoen said he had tried to give oaken objects an old appearance by rubbing aniline oil on them, but without good results; the colour thus imparted reminded one rather of mahogany, and was but very superficial. On the other hand, he got a dark brown tone similar to that of old oak by saturating the wood first with a solution of aniline salt (sulphate of aniline), and next with caustic soda. Similar results were obtained with walnut and plumb-tree wood, &c. Caustic potash alone, of course, gave a somewhat similar effect, but inferior to that obtained by the simultaneous use of aniline salt. Herr Schoen further attempted to colour wood black by treating it successively with aniline salt, bichromate of potash, and caustic soda, the wood being dried after each operation. The colour thus obtained was very regular. The experiment succeeded with all kinds of wood tried—the most important home species and some foreign ones. It was pointed out that this colouring process can be quickly and easily carried out, and is, moreover, inexpensive. *The Furniture Gazette.*

Amber in the Industrial Arts.

The complete history of amber is yet to be written, but when written it will form a most interesting and instructive volume. Known and valued from the very earliest times, it has a name in most languages, and its Greek name, *electron,* has left its impress upon our own and most other tongues. Nearly two thousand years ago Pliny, the naturalist, wrote that amber was the fossil resin of an extinct cone-bearing tree, and modern science can say of it but little more. In a short paper on this subject laid before the last meeting of the American Association for the Advancement of Science, Mr. Erminnie A. Smith gives an epitome of what is known on the subject. The original amber-producing forest probably reached from Holland over the German coast, through Siberia and Kamschatka, even to North America. One of the most celebrated deposits is on the peninsula of Samland, a portion of Prussia, nearly surrounded by the Baltic Sea. The northern part of this region, constituting the promontory of Brüsterort, is hilly, and the coast banks are often from 150 ft. to 300 ft. high. At one time all the amber found here, even by the peasants in ploughing, belonged to the German Government, the finder, however, receiving one-tenth of its value. For a piece in the Berlin Museum weighing 18 lb. the finder is said to have received a thousand dollars. During stormy weather, when the wind and waves beat violently against this coast, a great quantity of amber is washed up. The total yearly product is, however, apparently on the decrease, and so the price of amber is on the increase. Professor Zaddach, of Königsberg, concludes, that the trees yielding the amber resin must have grown upon the green sand beds of the cretaceous formation, which at the time formed the shores of estuaries where the lower division of the tertiary accumulated. Immediately over the amber-producing strata rest the brown coal beds, the fossil plants found in which differ entirely from the amber-bed flora. Many insects and plants are found embalmed in the amber. Over 800 species of the former have been named, and over 160 of the latter. When collected it is, for the purposes of trade, divided into classes, the best pieces being generally sent in the rough to Constantinople, where they are in great demand for the mouthpieces of pipes. The smaller-sized pieces are used for beads, &c., and the impure morsels for the manufacture of succinic acid or in the preparation of amber varnish. Amber is distinguished from other resins by its hardness, its lesser brittleness, the much higher temperature required to reduce it, and its greater electric action. At certain temperatures it is also extremely flexible. The imitations of amber are numerous, but all are detected by the use of the electrometer. While the colour of true amber is generally yellow, it occurs in all shades, from pure white to black.

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Glass made from Bones.

Yet another use has been found for bones, for it is stated that after extracting phosphorus from them a glass can be formed from the residue, which consists of lime and phosphoric acid; the ordinary kinds of glass being composed of sand and potash, soda, lime, and alumina. Bone glass, says *Design and Work,* can be worked as readily as any other glass. It has the valuable property of not being attacked by fluoric acid.

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